usbLOGiC USB-AV-Player

USB-C20

For navigation systems
Mercedes Benz
Comand 2.0, Comand APS CD
and Comand APS 220

Product features

- USB-port for media up to 2 TB (2000GB)
- supports FAT32 and NTFS formatted media
- multi partition capable
- compatible with MP3, AVI, VOB, MOV, RMVB, JPG and many more
- last position memory
- integrated into and controllable by vehicle infotainment
- AV-input with IR-control channel
- control of after-market devices by OEM buttons, e.g. DVD-player, USB/iPod devices, …
- after-market rear-view camera input
- automatic switching to rear-view camera input (only from usbLOGiC mode)
- rear-view camera power (+12V max. 1A)
- rear-seat-entertainment AV-output
- optional remote control for full USB functions/rear-seat-entertainment
- power on remote out trigger signal (+12V max. 1A) to switch on connected devices
- video-in-motion

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Legal Information

By law, watching moving pictures while driving is prohibited, the driver must not be distracted. We do not accept any liability for material damage or personal injury resulting, directly or indirectly, from installation or operation of this product. This product should only be used while standing or to display fixed menus or rear-view-camera video when the vehicle is moving, for example the MP3 menu for DVD upgrades.

Changes/updates of the vehicle's software can cause malfunctions of the interface. We offer free software-updates for our interfaces for one year after purchase. To receive a free update, the interface must be sent in at own cost. Labor cost for and other expenses involved with the software-updates will not be refunded.

1. Prior to installation

Read the manual prior to installation. Technical knowledge is necessary for installation. The place of installation must be free of moisture and away from heat sources.

1.1. Delivery contents

Take down the SW-version and HW-version of the interface boxes, and store this manual for support purposes.

If remote function for a peripheral device shall be used, additionally an IR-remote cable and Y-adapter are needed, see chapter *AV-source* .

1.2. Check compatibility of vehicle and accessories

Requirements	
Vehicle	Mercedes Benz C-Class (W203) til 04/2004, CL-Class (C215) from 09/2002 til 09/2003, CLK-Class (C208 W208) all years, CLK-Class (C209 W209) til 05/2004 , E-Class (W210) all years , G-Modell (W463) til 03/2007, ML-Class (W163) all jears, S-Class (W220) from 09/2002 til 09/2003, SL-Class (R230) til 06/2004
Navigation	Comand 2.0, Comand APS CD
Limitations	
Factory-TV-tuner	Must NOT be installed.
After-market rear-view cam	Automatic switching to camera only works from usbLOGiC mode
USB-port	Only for media which work with power supply by ONE single USB connector.

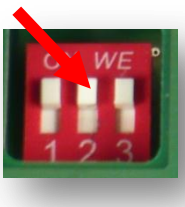
1.3. Setting the dip switches of the USB-box USBC-M500

The default dip switch settings of the USB-box need to be changed ONLY if an after-market rear-view camera shall be connected or if the AV of the usbLOGiC shall be deactivated. The dip switches are located **inside** the USB-box.
For changes it is necessary to open the box.
Default settings are:

dip1 = ON, dip2 = OFF, dip3 = ON

1.3.1. Automatic switching to rear-view camera

If an after-market rear-view camera shall be connected, in order for the usbLOGiC to automatically switch to its camera input on engaged reverse gear,
set dip2 = ON (up).



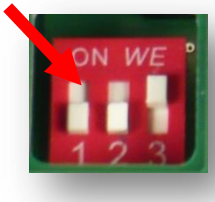
Dip switches of USB-box

Note: With after-market cameras, automatic switching works only from usbLOGiC mode.

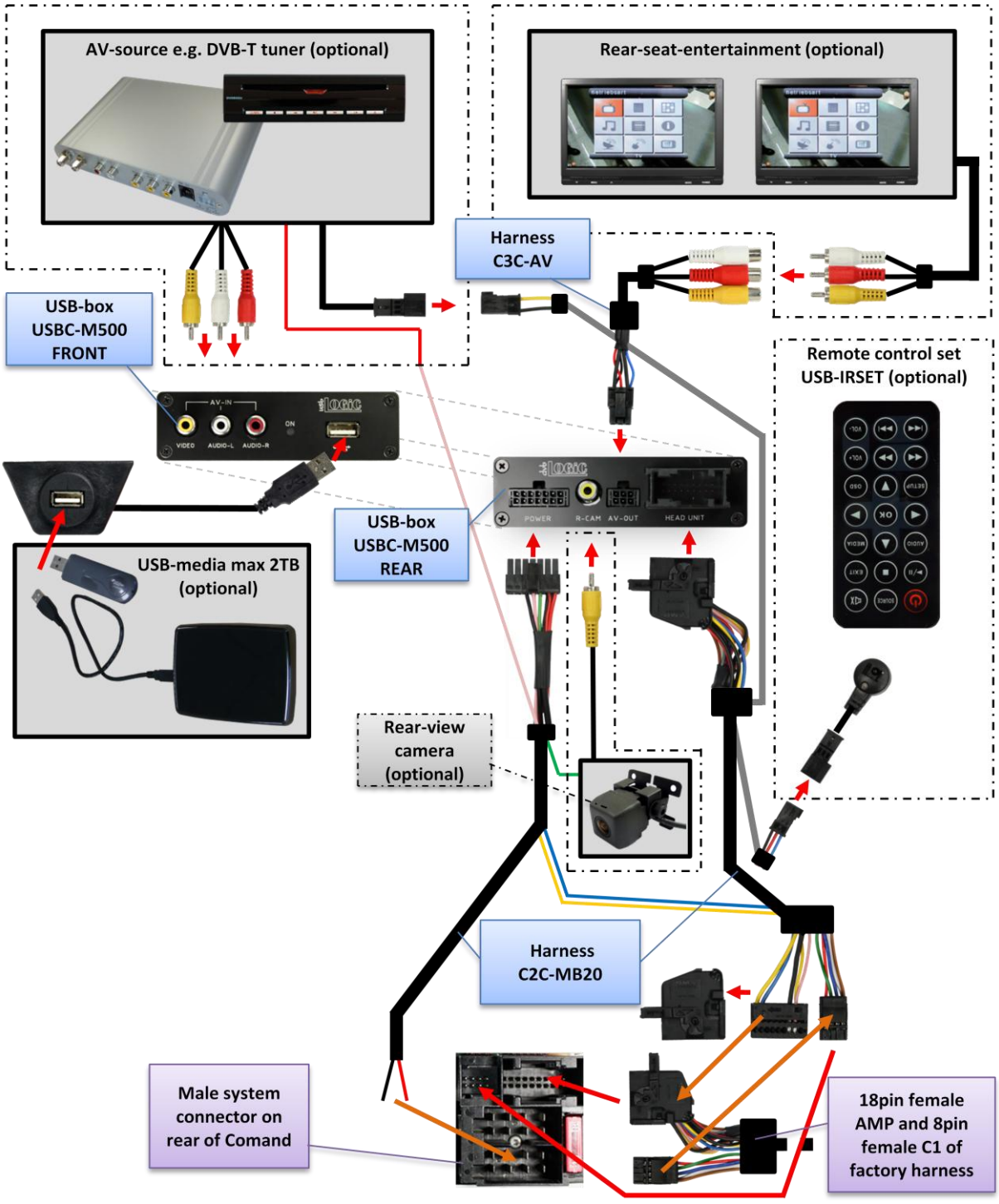
1.3.2. Deactivating usbLOGiC AV-input

Dip switches of USB-box

If no peripheral AV-source shall be connected to the usbLOGiC, we recommend to disable the AV-input, to avoid customers switching by mistake to black/no picture of the AV-input. In order to disable the AV-input of the usbLOGiC,
set dip1 = OFF (down).



2. Connection schema

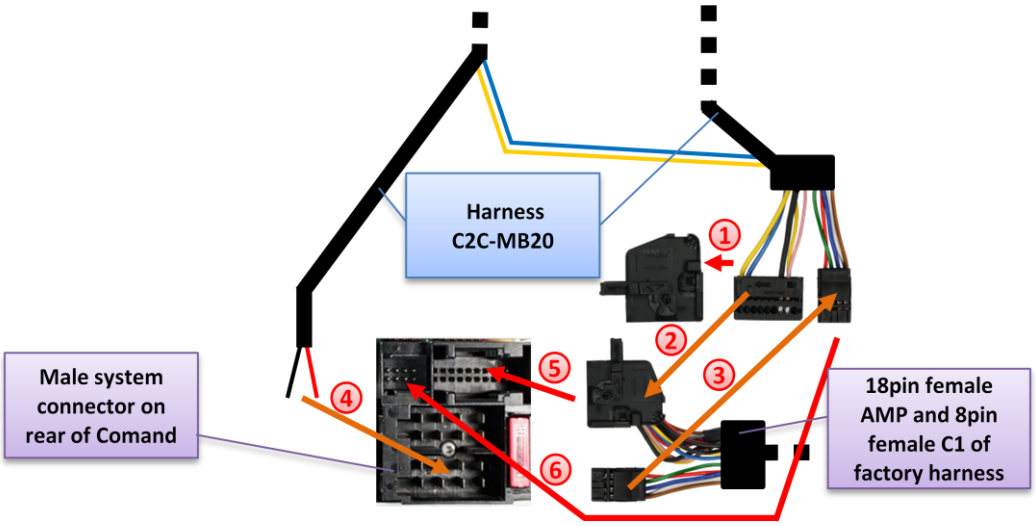


3. Installation

Switch off ignition and disconnect the vehicle's battery! If according to factory rules disconnecting the battery has to be avoided, it is usually sufficient to put the vehicle in sleep-mode. In case the sleep-mode does not show success, disconnect the battery with a resistor lead.

3.1. Connections to the Comand

Place of installation is behind the Comand. Remove the head-unit from the dash-board.



1. Remove shell from female 18pin AMP connector of C2C-MB20.

2. Transfer pins 2 (pink), 11 (yellow) and 3 (black) from female 18pin AMP connector of C2C-MB20 to corresponding slots of female 18pin AMP connector of factory harness. If occupied remove and isolate factory wires (take notes before removing).

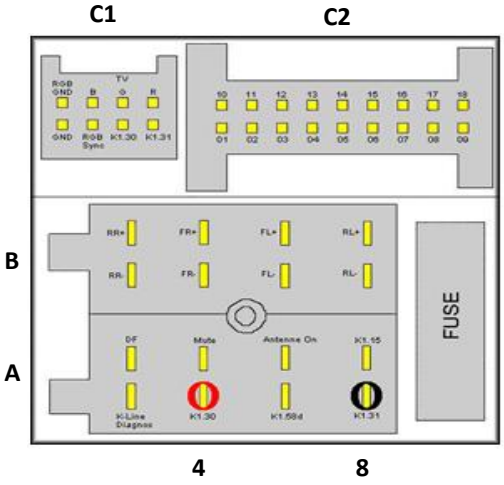
   Transfer pins 17 (blue) and 18 (yellow) from female 18pin AMP connector of C2C-MB20 to corresponding slots of female 18pin AMP connector of factory harness. If occupied connect additionally to the factory wires.

3. If existing transfer pins 5 and 6 from female 8pin C1 connector of factory harness to corresponding slots of female 8pin C1 connector of C2C-MB20. If existing, other pins remain in the factory connector.

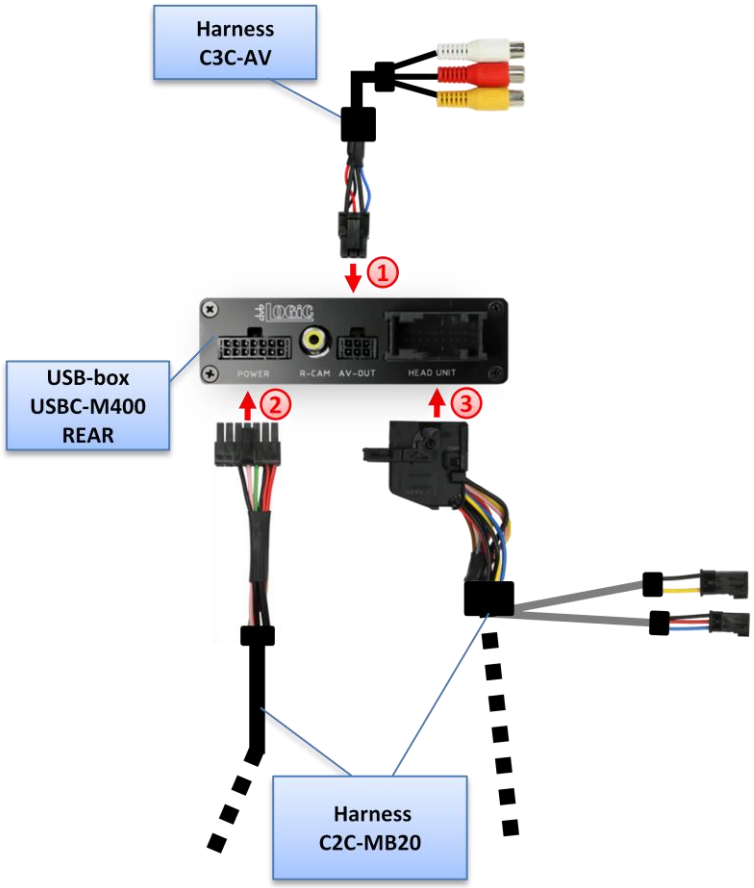
4. Connect loose red wire of C2C-MB20 to pin 4 of chamber A (+12V battery power).
   Connect loose black wire of C2C-MB20 to pin 8 of chamber A (ground).

5. Plug female 18pin AMP connector of vehicle harness into C2 slot of Comand's male system connector.

6. Plug female 8pin C1 connector of harness C2C-MB20 into C1 slot of Comand's male system connector.

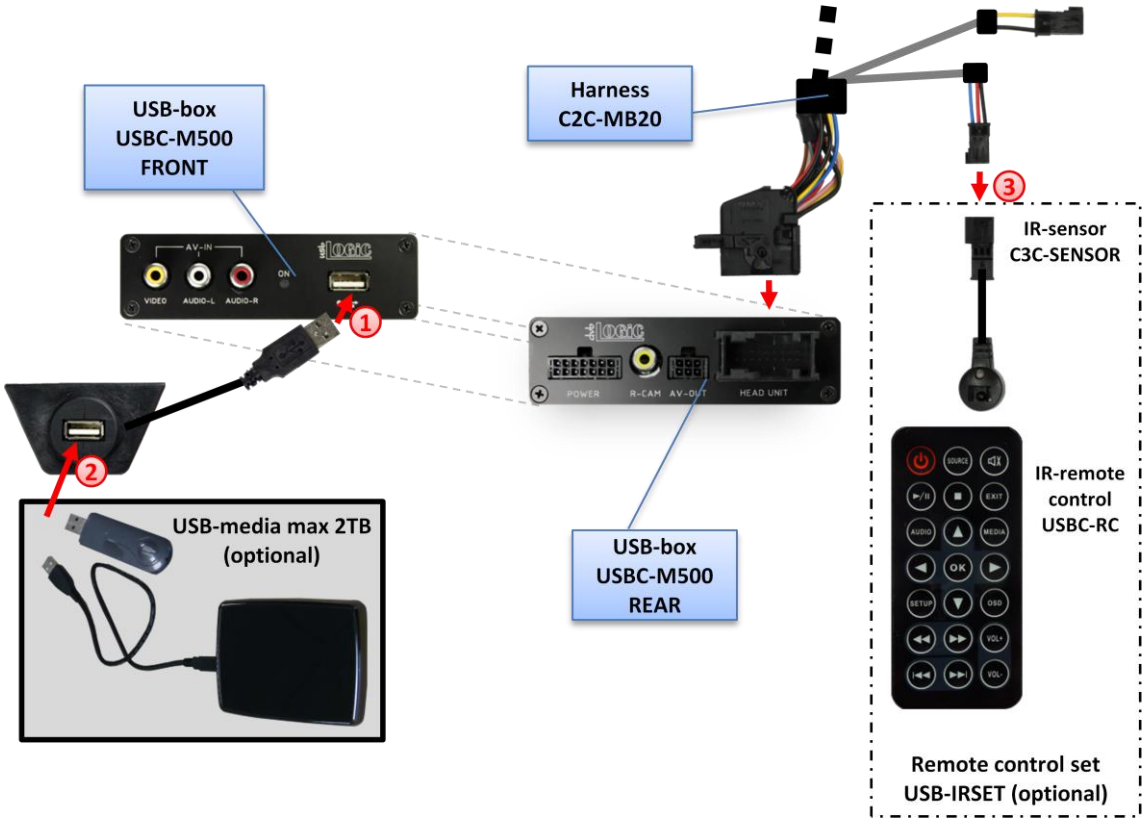


3.2. Interconnecting USB-box and harnesses



1. Plug harness C3C-AV into 6pin Molex of USB-box USBC-M500.
2. Plug harness C2C-MB20 into 14pin Molex of USB-box USBC-M500.
3. Plug female 18pin AMP-connector of C2C-MB20 into male 18pin AMP-socket of USB-box USBC-M500.

3.3. USB and optional IR-remote control set



1. Connect USB-connector of USB-installation socket USBC-EXT to USB-socket of USB-box USBC-M500 and install the USBC-EXT socket in a well accessible location, e.g. the glove-box. Make sure there is enough space to load USB-media.

2. Installation socket for the connection of USB-media.

3. The USB-IRSET consists of the external C3C-SENSOR IR-sensor and the USBC-RC IR-remote control and can be used to control the usbLOGiC's internal USB functions additionally to the control through the navigations buttons. Connect the C3C-SENSOR to the female black/red/blue 3pin AMP connector of harness C3C-AVIR and locate the sensor in an accessible place.

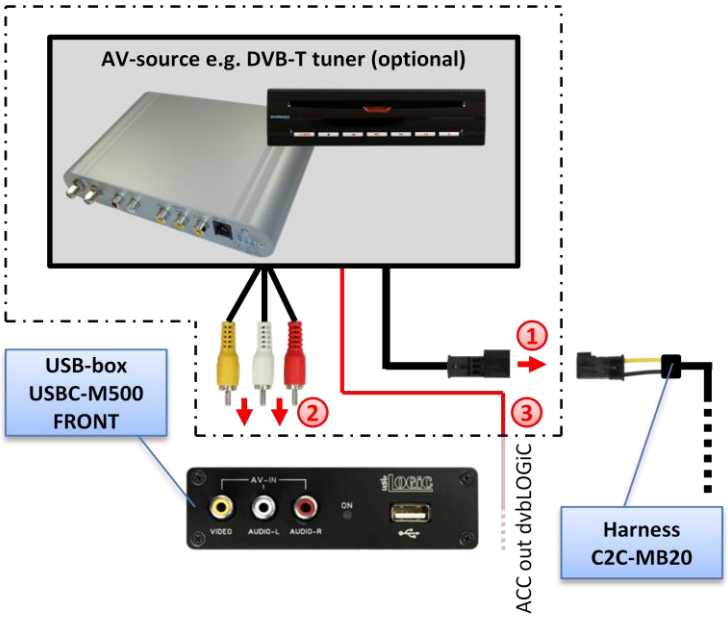
3.4. Connecting peripheral devices

It is possible to connect an after-market AV-source, an after-market rear-view camera and rear-seat-entertainment to the usbLOGiC.

Before final installation of the peripheral devices, we recommend to test-run the usbLOGiC functions to detect incompatibility of vehicle, navigation, factory accessories or peripheral devices as soon as possible.

3.4.1. AV-source

The usbLOGiC has the possibility to connect and remotely control by navigation buttons a pre-programmed device. The device list in the device control table (appendix A) shows the pre-programmed remote channels and the related IR-remote cables STA-xxx which must be ordered separately for the control of the device.



1. Using the respective STA-xxx IR-control cable, interconnect the yellow female 3pin AMP connector of harness C2C-MB20 and the IR-port of the AV-source.

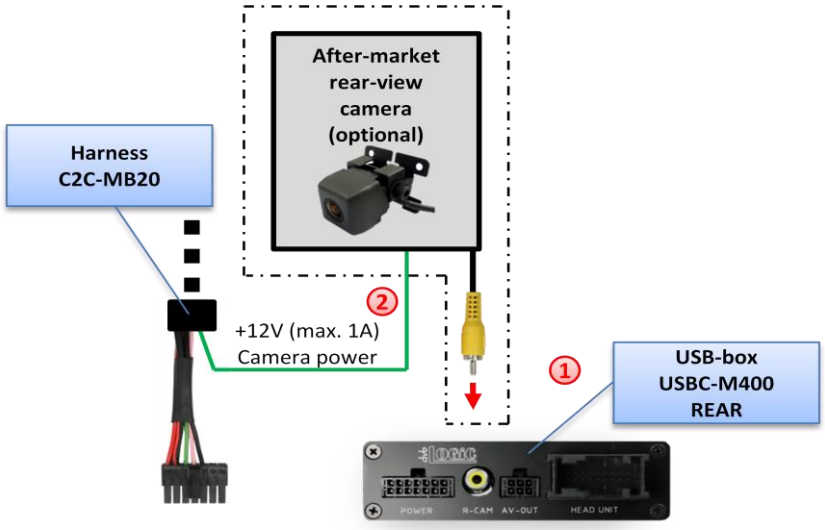
2. Using an RCA-cable, interconnect the female RCA-port AV-IN of the USB-box USBC-M500 with the AV-output of the AV-source.

3. The pink ACC-output wire (+12V max 1A) of harness C2C-MB20 can be connected to the ACC-input wires of the connected device to switch it on. It carries +12V when the head-unit is running.

3.4.2. Installing AV-source's IR-sensor additionally

Additionally to the control via OEM navigation, it is possible to install the original IR-sensor of a connected device. By using the respective Y-adapter (e.g. STA-Y35MM or STA-RJ12) for the IR-Port of the connected device, the controls of navigation AND device's IR-sensor can be connected and used simultaneously. Installation of the IR-sensor is recommended as the controls via navigation are limited, and not all functions may be covered.

3.4.3. After-market rear-view camera

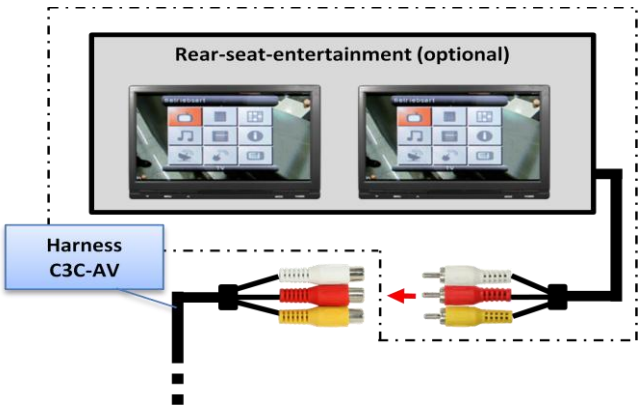


1. Connect the video RCA of the after-market rear-view camera to female RCA connector R-CAM IN of USB-box USBC-M500.

2. Connect the green wire of C2C-MB20 to the camera power supply (+12V max 1A) The green wire is high (+12V) when reverse gear is engaged.

   Note: Automatic switching to camera only works from usbLOGiC mode.

3.4.4. After-market rear-seat-entertainment



1. Using RCA-cables, connect the rear-seat-entertainment to the female RCA-connector VIDEO OUT of USB-box USBC-M500.

   Note: As the output is a full output, not shared with the video signal for the navigation system, splitting the video with an RCA Y-cable might give a good enough picture for two rear-seat-entertainment monitors. If not, or if connecting more than two monitors, use a video splitter.

4. Operation

4.1. Activation of the video-in-motion function

The video of the usbLOGiC is displayed also in motion.

Note: On vehicles with previously installed factory TV-tuner an extra video-in-motion interface might be necessary. It is not possible to determine this prior to testing.

4.2. Selecting the usbLOGiC as current AV-source

Push **TV** button of Comand to choose the usbLOGiC as current AV-source.

4.3. Switching between internal USB and AV-input

After selecting the usbLOGiC as current AV source, longpress the **right knob** or the "**5**"-button 3 seconds to switch between USB and AV-input. Repeat to switch back.

Note: If the AV-input is deactivated (see chapter "Deactivating usbLOGiC AV-input"), it is not possible to switch to the usbLOGiC's AV-input AV-IN.

4.4. Assigning device control for connected AV-source

After selecting the usbLOGiC as current AV source, switch to the usbLOGiC's AV-input. Now longpress number the"**1**"-button or shortpress the "**RET**"-button. The display in the instruments will show "TV 2" and "RC01". Turn right knob until the device-related IR-code as described in device control table (appendix A) is reached. Push right knob to confirm the assignment.

If the vehicle has no MFD display in the instrument panel, you must count the notches when turning the knob (to the right +1, to the left -1). At the same time, remember that the starting point is channel RC01 (the first notch to the right is then already RC02).

Note: If the AV-input is deactivated (see chapter "Deactivating usbLOGiC AV-input"), it is not necessary, nor possible to assign device controls.

4.5. Button assignment table

The button assignment table shows which functions of usbLOGiC and additionally connected devices can be executed by Comand buttons. Once USB or AV-input mode is activated, the Comand button in the left column will execute the function described in the corresponding device column. The function description equals the remote control buttons of the optional usbLOGiC remote control or the additional device. On the additional device the writing may vary (e.g. AV instead of Source).

	Button assignment table usbLOGiC Comand 2.0/APS CD/APS 220					
COMAND button	**Internal USB**	**DVB-T tuner**	**DVD-player**	**DVD-changer**	**iPod®-control**	**Analog-tuner**
1	POWER	SCAN	PLAY	PLAY	PLAY/PAUSE	SCAN
2	↑	↑	↑	↑	↑	VOL +
3	EXIT	EPG	STOP	STOP	POWER	FM
4	←	←	←	←	←	CH -
4 long	VOL-	DISPLAY	DISPLAY	DISPLAY		DISPLAY
5	OK / PLAY	OK	OK	OK	ENTER	MODE
6	→	→	→	→	→	CH +
6 long	VOL+	AUDIO	AUDIO	AUDIO	MUTE	FM
7	MEDIA	EXIT	PBC	PBC	SHUFFLE	MUTE
7 long	OSD	LANG	ZOOM	DISC		MUTE
8	↓	↓	↓	↓	↓	VOL -
9	SETUP	MENU	SETUP	SETUP	LIGHT	ADJUST
11	*MEDIA*	AV	AV	AV	EJECT	DISPLAY
11 long	POWER	POWER	POWER	POWER	POWER	POWER
14	↓	↓	↓	↓	↓	VOL -
15	↑	↑	↑	↑	↑	VOL +
16	OK / PLAY	OK	OK	OK	ENTER	MODE
17	TRACK -	CH -	TRACK -	TRACK -	TRACK -	CH -
18	TRACK +	CH +	TRACK +	TRACK +	TRACK +	CH +

Additionally to the head-unit buttons, the steering-wheel buttons UP and DOWN can be used for remote functions. DOWN-button has the same function as **17** on the head-unit and UP-button has the same function as **18** on the head-unit.

4.6. Picture settings

By pressing the button **10**, it is possible to switch between 4:3 and 16:9 picture format
(Only possible on Comand APS CD/220).
To enter the picture settings menu longpress button **13**.

The picture settings menu always starts with the brightness settings. The respective current picture value is displayed on the instrument panel.

Press the right knob to change from brightness to colour and contrast (after contrast, the interface starts again with brightness).

Turn the right knob to change the current picture value. To quit the settings menu press button **13**.

4.7. Audio settings

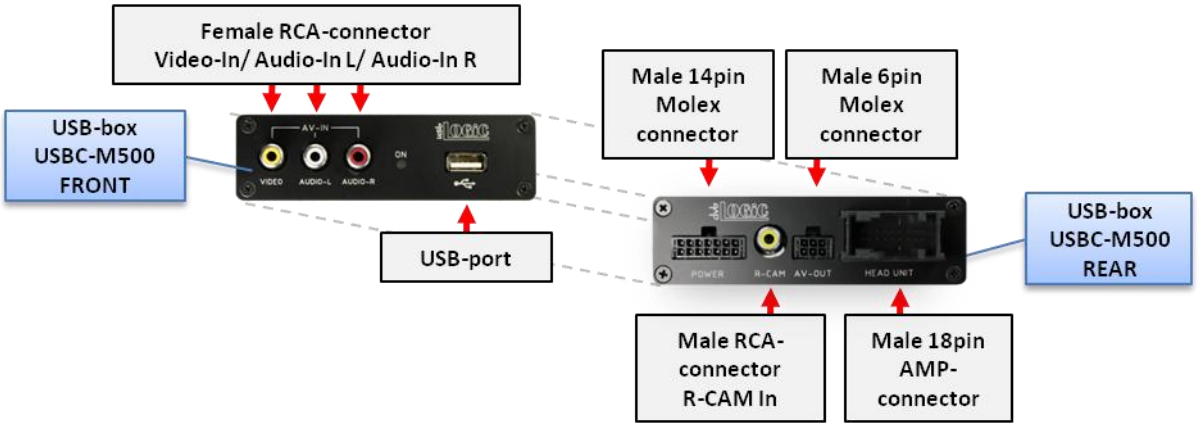
To enter the Comand's audio settings menu press button **12**.

5. Specifications

Operation voltage	10.5 – 14.8V DC
Stand-by power drain	<1mA
Operation power drain	min. 450mA/max. 950mA
Power consumption	min. 6W/max. 13W
Power rating USB-port	0,5A permanent (0,8A max)
Temperature range	-30°C to +80°C
Weight	312g
Measurements (box only) B x H x T	135 x 30 x 105 mm

CE ⎓12V DC

6. Connections (USB-box)



7. Technical Support

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